Constellation
X-Ray Mission

Program Status and Progress Since February FST Meeting

Jean Grady
FST Meeting
September 24, 1998

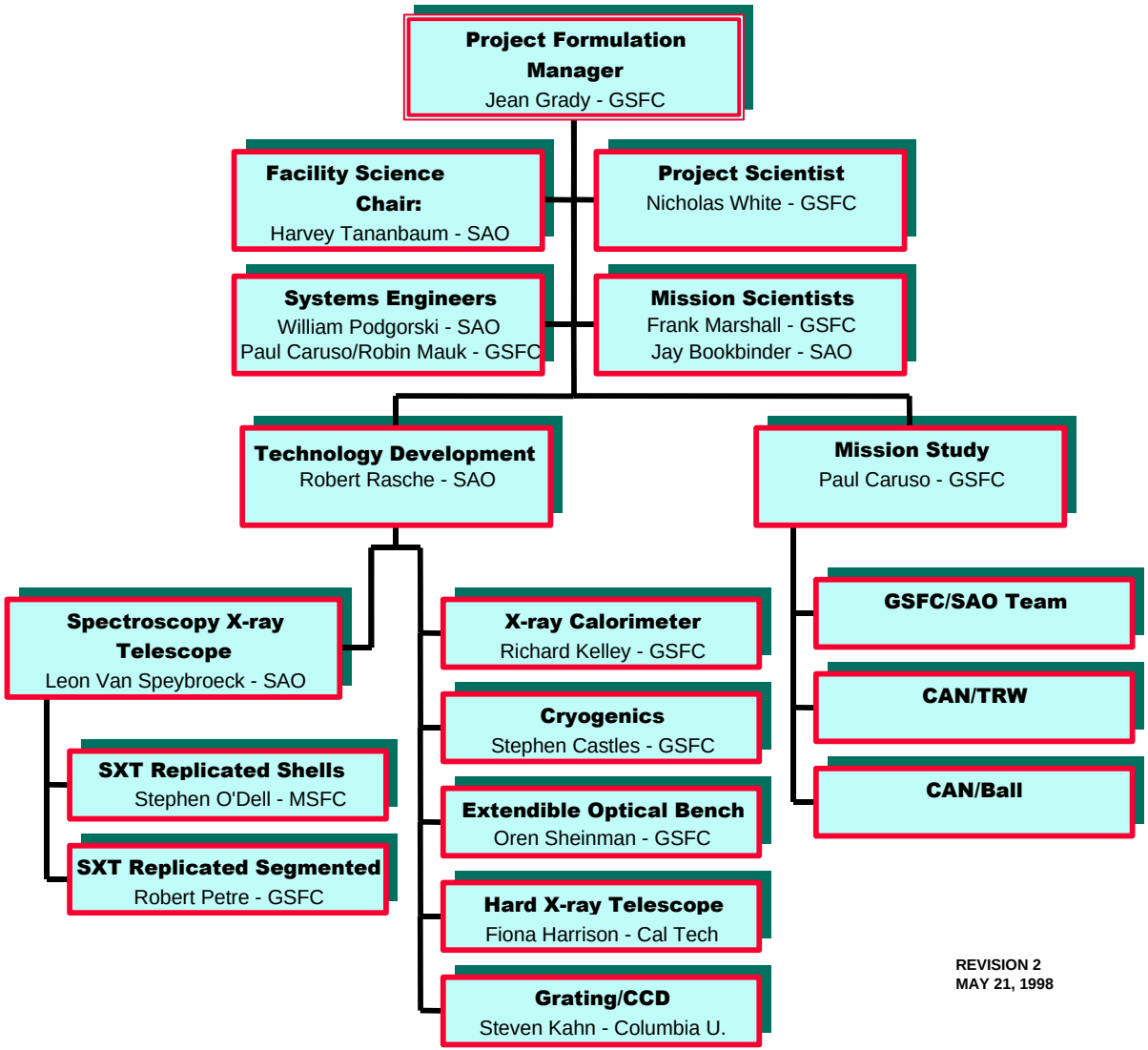
- Project Status Overview — Jean Grady
- Technology Development — Bob Rasche
- Mission Architecture Studies
  - Introduction/Requirements — Paul Caruso
  - GSFC/SAO Configuration Update — Oren Sheinman
- CAN Summary Presentations — Ball/TRW

Mission Formulation Progress

Jean Grady
FST Meeting
September 24, 1998

- Technology NRA evaluations and selections complete, development underway
- Mission Concept Development gaining momentum with GSFC/SAO efforts and Industry CANs
- Project formulation organization in place
- Annual “State of the Universe” report to Code S Associate Administrator in May 1998
- Requirements documentation process in place

Constellation-X Organization



Technology Development NRA

NRA process utilized to select Microcalorimeter, Grating/CCD and Hard X-ray Telescope technology development

- Scope
  - Multi-year effort to develop technologies to prototype level (Technology Readiness Level 6)
  - Contracts structured into basic contract plus options to allow budget flexibility

- Status
  - Seven (7) proposals selected by independent review panel in April 1998
  - Contracts awarded to 5 of 7 selected PI institutions in June 1998
  - Kick-off meeting at GSFC between technology PI's and project team in June 1998

Technology Development
NRA Selections

Jean Grady
FST Meeting
September 24, 1998

Technology	PI	Lead Institution
Microcalorimeters		
- Comprehensive Microcalorimeters	Dr. Richard L. Kelley	NASA/Goddard Space Flight Center
- Multilayer Absorbers and Sensors	Dr. Simon E. Labov	Lawrence Livermore National Laboratory
- Tungsten TES Microcalorimeters	Dr. Blas Cabrera	Stanford University
Hard X-ray Telescope		
- Comprehensive HXT	Dr. Fiona A. Harrison	California Institute of Technology
- Hard X-ray Optics	Dr. Melville P. Ulmer	Northwestern University
- Silicon Strip Detectors	Dr. W. Neil Johnson	Naval Research Laboratory
Grating/CCD		
- Comprehensive Grating/CCD	Dr. Steven M. Kahn	Columbia University

Near Term Plans

- Activities to support upcoming decadal review and 1999 "State of the Universe" report
  - Update technology roadmap to incorporate selected NRA technologies and reflect current plans
  - Perform independent estimates of mission cost
  - Complete science booklet for distribution at January AAS

- NRA Technology Development
  - Complete NRA contract awards and augmentations to the basic contracts
  - Hold first round of semi-annual technology progress reviews
  - Exercise contract options 1 beginning in January 1999

Near Term Plans (continued)

- Mission Concept Development
  - Generate solicitation and award follow-on to industry CANs
  - Continue GSFC/SAO concept definition
  - Continue to define and refine mission requirements flow down
- Anticipate mission introduction and status briefing to new AA

Budget/Schedule Status

Jean Grady
FST Meeting
September 24, 1998

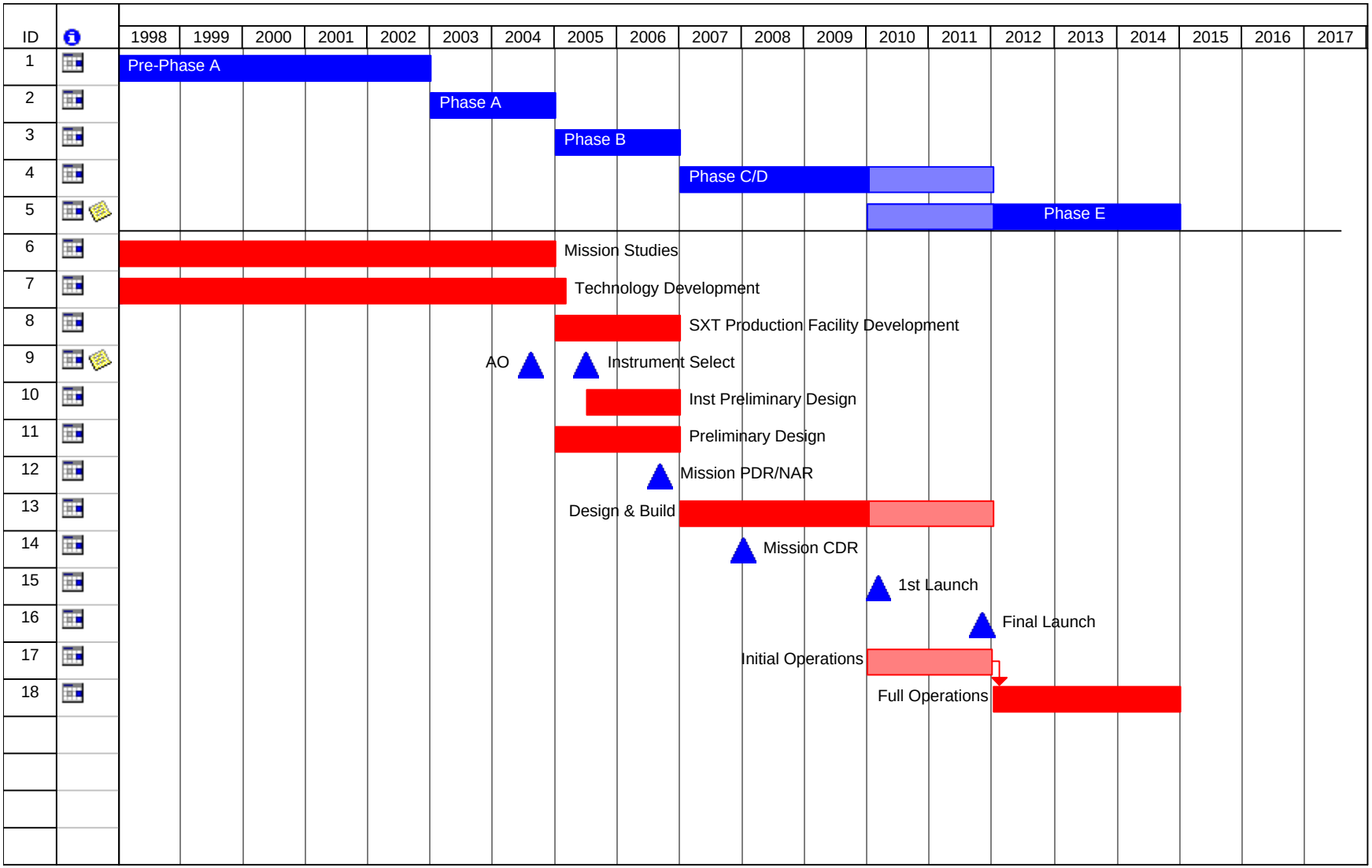
- Constellation-X technology development budget in operating plan for FY99 thru FY03
  - Current guidelines fall short of budget required to meet FY04 Approval (New Start)
  - Overguide requested to maintain technology driven schedule

- Entering into FY99 without promise of any overguide funds
  - Technology development effort planned for the next year would stretch over two years
  - Liens list generated to identify high priority technology “add-backs”

Constellation
X-Ray Mission

Schedule with In-guide Budget

Jean Grady
FST Meeting
September 24, 1998



Constellation X-Ray Mission

Schedule with Over-guide

Jean Grady
FST Meeting
September 24, 1998